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ABSTRACT

One of a series of seven modules developed to improve the knowledge and skills of vocational educators who are or will become involved in the instruction of handicapped students in regular (mainstream) classes, this module is intended for inservice training of vocational educators (including administrators, coordinators, counselors, and preservice trainees) working at the secondary level and focuses on developing a general understanding of the goals, components, and approaches used in regular vocational education programs involving the legally blind and partially seeing. Specifically, the purposes are (1) to familiarize vocational educators with particular handicapping conditions of the legally blind and partially seeing including terminology, variations in severity, and differing capabilities of these students (section 1), (2) to outline and discuss plans for individualizing instruction so that it will meet the needs of visually handicapped students and will simplify the educator's task in teaching these students (sections 2 and 3), and (3) to provide vocational educators with resource and referral agencies (State, Federal, private, and nonprofit) and with various publications that can aid them in dealing with visually handicapped students (covered in a separate Resources Section). (Author/HD)

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# MAINSTREAMING THE HANDICAPPED IN VOCATIONAL EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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## Serving the Visually Handicapped

CE 011 778

PREPARED BY

Behavioral Science and Technology Group

American Institutes for Research
Palo Alto, California

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The Consortium of the California State University and Colleges

## STATE OF CALIFORNIA

### Statement of Understanding Between the State Board of Education, the Board of Governors of the California Community Colleges, and the Department of Rehabilitation

**Background**

The Vocational Education Act of 1968 (P.L. 90-576) has as one of its purposes the development of vocational training and retraining programs for handicapped persons.

To insure that such training is realistic with respect to the special needs of handicapped persons, the Act requires that state leadership in special education services and vocational education services enter into cooperative arrangements.

**Purpose**

The purpose of this statement of understanding is to assure continued and augmented cooperation between the Department of Rehabilitation staff, the State Board staff, and the Board of Governors staff in such actions as the following:

1. The development of provisions in the State Plan for the vocational education of handicapped persons in California.
2. The review of applications for funds for programs or projects providing benefits to handicapped persons.
3. The development of appropriate programs and project activities to meet the vocational education needs of the handicapped.
4. The development of appropriate inservice training of teachers for the handicapped.
5. To provide for interdepartment communication to facilitate program evaluation.

This statement of understanding is intended to formalize the working relationship between these state agencies.

For the Department of Education and the State Board of Education:

Signed: Wilson Riles

Superintendent of Public Instruction, Director of Education, and executive secretary, State Board of Education

For the Department of Rehabilitation:

Signed: Gary Tacorne

Acting Director, Department of Rehabilitation

For the Board of Governors of the California Community Colleges:

Signed: Glen Brosman

Chancellor and the executive officer, Board of Governors of the California Community Colleges

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Reprinted from California State Plan for Vocational Education. California State Department of Education, 1976.

STATE OF CALIFORNIA
DEPARTMENT OF EDUCATION

Vocational Education Support Unit

## Statement of Understanding Between the Vocational Education Support Unit and the Special Education Support Unit

**Background**

The Vocational Education Act of 1968 (P.L. 90-576) has as one of its purposes the development of vocational training and retraining programs for handicapped persons.

To insure that such training is realistic with respect to the special needs of handicapped persons, the Act requires that state leadership in special education services and vocational education services enter into cooperative planning and program implementation arrangements.

**Purpose**

The purpose of this statement of understanding is to assure continued and augmented cooperation between the staffs of the Special Education Support Unit and the Vocational Education Support Unit of the State Department of Education in such actions as the following:

1. The joint development of provisions in the State Plan for the vocational education of handicapped persons in California
2. The joint review of those applications for funds for programs of projects providing benefits to handicapped persons.
3. The joint development of appropriate programs and project activities to meet the vocational education needs of the handicapped.
4. The joint development of appropriate inservice training of teachers for the handicapped and of vocational education teachers working with the handicapped.
5. To provide for intradepartment and interdepartment communication to facilitate program evaluation.

This statement of understanding is intended to formalize and recognize the working relationship that has long existed between these two services within the California State Department of Education.

For the Vocational Education Support Unit:

Signed: Samuel L. Barrett

State Director of
Vocational Education

For the Special Education Support Unit:

Signed: Leslie Brinegar

Manager, Special Education
Support Unit

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Reprinted from California State Plan for Vocational Education. California State Department of Education, 1976.

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# Introduction

This is one of a series of modules developed by the American Institutes for Research to improve the knowledge and skills of vocational educators who are or will become involved in the instruction of handicapped students in regular (mainstream) classes.

This module is intended for inservice training of vocational educators working at the secondary level and focuses on developing a general understanding of the goals, components, and approaches used in regular vocational education programs involving the legally blind and partially seeing.

Purposes of This Module

1. To familiarize vocational educators with particular handicapping conditions of the legally blind and partially seeing including terminology, variations in severity, and differing capabilities of these students.
2. To outline and discuss plans for individualizing instruction so that it will meet the needs of visually handicapped students and will simplify the educator's task in teaching these students.
3. To provide vocational educators with resource and referral agencies and with various publications that can aid them in dealing with visually handicapped students.

The module is organized into these main sections: (1) The Educator, the Student, and the Task; (2) Establishing a Plan for Individual Instruction; and (3) Carrying Out a Plan of Individual Instruction. In addition, descriptions of programs, suggested resources, and a bibliography are included as aids in further study. Finally, an assessment section appears at the end of the module for your own self-evaluation of your understanding of the material presented.

# The Educator, the Student, and the Task

The classroom teacher who is confronted with a visually handicapped student in the midst of what he or she has considered a homogeneous group of "normal" students may find the situation disconcerting in terms of anticipated personal frustration and potential disruption of classroom order and procedures. If the teacher is assigned several handicapped students having different disabilities with varying degrees of severity, the problem becomes compounded, and solutions appear even more elusive.

A major step in tackling this problem is to learn about the handicap itself, the person with this particular handicap, and the process of relating the person and the handicap to the vocational education task at hand--all these facets must be explored in depth. However, the best place to start is with you--your feelings, attitudes, and apprehensions about this new challenge that you face.

> What do you have to offer the visually handicapped student in a regular vocational class?

## The Vocational Educator as a Human Resource

It is possible that you believe that dealing with visually handicapped students belongs in the realm of the special educator. However, legislators, researchers, and many educators agree that mainstreaming of these students is imperative if they are to take their places in society as productive persons rather than to be segregated in special schools. Mainstreaming can also enlighten non-handicapped persons about the abilities of the handicapped.

It is quite natural for you to think that you have insufficient knowledge of a handicapped student's problems and needs; that you don't have the training necessary to deal with visually handicapped students; that you hardly have time for the other students in your class and cannot

spare the extra time that will surely be needed for this kind of student. It is also natural for you to be concerned about possible negative impact and effect on the other students or the classroom procedure and to worry about adverse relationships with prospective employers with whom you must deal in your professional capacity.

Actually, you are more prepared to handle the challenge than you may realize. You are a valuable human resource for a visually handicapped student and almost certainly have many of the requisites necessary to deal with the task involved. Let's look at some of the assets you have that, when shared, can become rich resources for the totally blind and visually impaired. In your role as vocational educator you have specialized in teaching all your students practical technical skills, positive attitudes about work, good working habits, and personal and financial independence. Along with such practical vocational assets you are instilling more subtle and subjective interpersonal assets, including social adeptness. You are also enhancing the students' sense of themselves: their self-confidence, self-respect, self-concept, and self-esteem.

Perhaps by listing the assets you typically offer your class and the possible liabilities you may feel you will encounter with the addition of visually handicapped students, we can get a better view of the whole picture.

| Assets Presently Offered | Possible Anticipated Liabilities |
|---|---|
| technical skills | no familiarity with the handicapped |
| positive work attitudes | no training to teach the handicapped |
| good working habits | expenditure of extra time |
| independence | negative effect on classroom operation |
| social adeptness | negative effect on regular students |
| personal development | adverse relationships with prospective employers |

Before weighing the assets against the liabilities or even discussing ways of dealing with the possible liabilities, let's look at another facet of the total picture and perhaps reduce the necessity for dealing with the problems as such. Think of the "mainstream" or "normal" students that constitute your classes. Is such a "normal" class <u>really</u> homogeneous and

without problems? Isn't it probable that in any given classroom there are many students--possibly all of them at one time or another--with physical and mental problems? These include the student recovering from illness, an injury, or an operation; the student who is left-handed; the slow learner; the depressed student undergoing a crisis in the family or facing everyday living with an alcoholic parent; or the gifted child with not enough challenge in his work. All of these "normal" children might require extra time; all of them affect, at least to a degree, the classroom operation and divert the attention of the others; and their problems require at least explanations to prospective employers. You may have very little professional training to enable you to deal with these problems and meet the individual needs of these students, but you do deal with the problems of these students and you do meet their needs!

Every persons has some "handicap," some problem. You, as a teacher, deal with such problems every day--and effectively. Granted, the totally blind and visually impaired students will present a different level of handicap with different kinds of problems. Identifying the inherent problems is not so much the issue as the unknown factors concerning the handicap and ways to cope with it. In this day and age of individualized instruction and the emphasis on meeting the needs of each individual student--of seeing each student as being unique and having different needs that can be met with the use of a variety of instructional techniques and media--it should not be so difficult to integrate yet another unique individual into a classroom and tailor a program to meet his particular need.

## Understanding the Totally Blind or Visually Impaired Student

How familiar are you with vision problems?

Everything you learn in this module will have as its base an understanding of the totally blind and visually impaired student. To begin, we need to discuss the handicapping condition itself and to become familiar with definitions pertaining to it.

In the 1930s a legal and economic definition of blindness was drawn up to provide guidelines for the Social Security Act of 1935. The definition was meant to help determine who was eligible for federal-state aid to the blind and is commonly called "legal definition." It "requires that the better seeing eye has a distance vision of 20/200 or less when aided by the best spectacle correction using ordinary lenses, or a visual field of 20 degrees or less at the widest point" (Prime Study Group III, Eleventh Institute on Rehabilitation Services, 1973). The symbol 20/200 means that the person with such vision can see at 20 feet what a normal person sees at 200 feet. The person with 20/20 vision in considered to have normal or perfect vision, being able to see at 20 feet what one would be expected to see at 20 feet.

Over the years this definition of blindness has been found not to be a very functional one. A significant number of those classified as "legally blind" (20/200 or less) have learned to use their residual vision and read large and/or regular print. This finding has resulted in new working definitions, ones more practical for educators:

- Totally Blind. Those who have no functional vision to see print or objects in their environment.
- Visually Impaired. Those who have low vision and can see print or objects with optical aids.

It is important to understand that the term "visual handicap" is not limited to those persons with a total lack of sight. The totally blind represent some 10% of the legally blind population. There is a continuum from the totally blind up to those who are partially seeing. In between these extremes are many gradations and variations of impairment. Distinguishing between the totally blind individual and one with visual impairment is but a first step in learning about his handicapping category.

A variety of conditions, listed below, can cause blurring, sensitivity to light, jerky eye movements, or other problems. Some can result in total blindness. The more severe the impairment the greater the number of functional problems that are likely to be encountered in the vocational classroom.

- Myopia (nearsightedness): Causes blurred vision when the eyes try to focus on distant objects. A myopic person can see better when the object is brought close enough to the eye. The condition can be corrected by lenses.

- Hyperopia (farsightedness): Causes the eye to constantly adjust in order to get a clear image of close work. Excessive adjusting may cause symptoms such as eye fatigue, blurring, and headaches. This condition can also be corrected by lenses.

- Astigmatism: Prevents rays of light from coming to a single point of focus on the retina of the eye and produces an image that is distorted. Special lenses can correct the situation in most cases.

- Cataract: A condition in which the normally transparent lens becomes opaque and clouded, and vision becomes blurred. Surgery is usually the best method for improving vision.

- Retinitis Pigmentosa: A chronic, progressive, degenerative disease of the retina. It can occur early in childhood or at a later age. Night blindness is the first symptom. The visual fields are usually restricted, leaving only central vision, which may later be destroyed. At present there is no known cure.

- Retrolental Fibroplasia: Characterized by the formation of scar tissue behind the lens of the eye. This condition develops chiefly in infants born prematurely and subjected to a high concentration of oxygen. Both eyes are generally affected.

- Structural Anomalies: Strabismus (crossed eyes) and nystagmus (rapid involuntary eye movements), result from abnormalities in the external ocular muscles. These conditions may be either constant or intermittent and are frequently associated with other visual defects.

- Optic Nerve Atrophy: Degenerative condition caused by injury or disease in the fibers of the optic nerve.

- Albinism: A hereditary condition associated with lack of pigment in the iris and choroid coat. Albinism may result in lowered visual acuity, jerky eye movements, and sensitivity to light.

- Glaucoma: A preventable eye disease caused by increased pressure within the eye. The cause is questionable, but the condition tends to follow a hereditary pattern. When treated early, the disease may be controllable and the remaining vision saved.

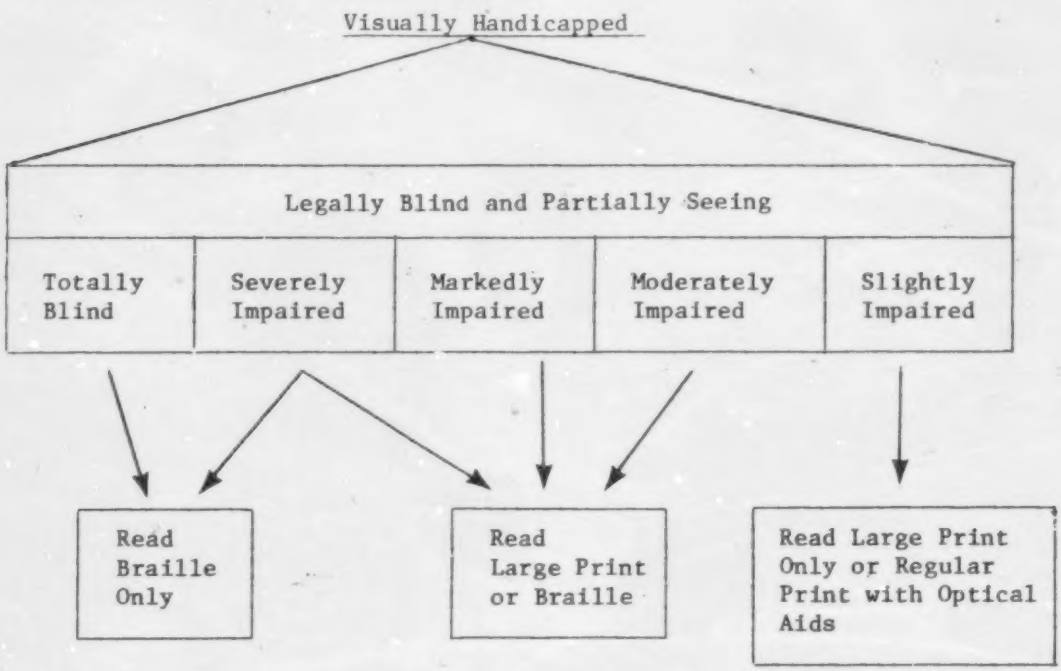
The needs of a visually handicapped student will vary according to the age at which the impairment occurred. The student who has been totally blind since birth or at an early age will need special help in developing

adequate concepts of space and form. The person recently blinded will need special help in adapting to his blindness.

With these definitions in mind let's look at some of the differing capabilities of visually handicapped students.

## Differing Capabilities

Reading Skills. This is one area in which the totally blind or visually impaired student will obviously differ from his other classmates. The degree of impairment will determine what degree of adjustment in reading materials is needed. The totally blind student will typically make use of different educational aids than will the slightly or moderately impaired student.




(Examples of braille and large print are given on the following page.)

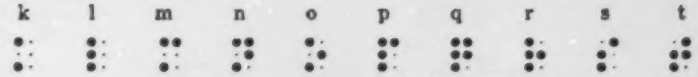
This is the braille alphabet and numbers together with a short sentence as an example.

**ALPHABET AND NUMBERS** **For Writer**

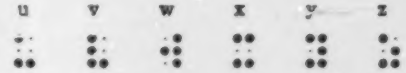
1 2 3 4 5 6 7 8 9 0

a b c d e f g h i j

k l m n o p q r s t



u v w x y z



The bill passed 403—13.

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This is an example of large print, consisting of a recipe from A Campbell Cookbook (1969), produced by Volunteer Service for the Blind, Inc., Philadelphia.

## CREAMED EGGS

1 can (10 1/2 ounces) condensed cream of celery, chicken, or mushroom soup

1/3 to 1/2 cup milk

4 hard-cooked eggs, sliced (use egg slicer)

2 tablespoons chopped pimiento

4 slices toast

In pan, blend soup and milk. Add eggs and pimiento. Heat; stir now and then. Serve on toast. 4 servings.

Braille is a "touch" system of reading. It is made up of an alphabet of raised characters. The characters consist of different combinations of six dots arranged in a cell two dots wide and three dots high. As you can see from the diagram, the totally blind student and some visually impaired students rely on braille for any reading they might do. Much information is already available in braille form, but if it isn't the student must create it, have it transcribed, or learn through other senses, primarily the sense of hearing. The visually handicapped student will lean heavily on the use of auditory aids such as tape recorders, records, electronic devices, volunteer readers, as well as braille books, to absorb information. The visually impaired student, on the other hand, can usually rely on his vision to some extent; therefore, large print books, magnifying lenses, or closed circuit television may be the main adjustments needed.

Academic Skills. Studies have shown that the academic abilities of the visually handicapped are not different from those of sighted students. With the use of instructional aids these students can be as capable as their sighted classmates in learning and performing a task. One area of difficulty that may call for special emphasis is the understanding of concepts. The visually handicapped student relies primarily on hearing and touch to become aware of the world, but many objects cannot be readily understood through touch or sound. Whenever possible the visually handicapped student should be given clear and detailed demonstrations of what is being explained to him. For example, pointing to a switch and saying to the class, "This turns on the machine," tells the student little. Saying something about its location relative to the machine, its basic shape, and turning it on momentarily for auditory clues, will allow the visually handicapped student to form a better concept of what you are talking about.

> Clear and detailed explanations give the visually handicapped student the whole picture.

Social Skills. One factor which effects the visually handicapped student's level of social skills is related to his ability to get around in his environment. His social independence, ease in new or strange social

situations, how he relates to his classmates, and how he sees himself are all dependent on the command that he has of himself and his environment.

An important factor in the blind worker's entry into the regular world of work is his ability to look and behave like other workers. The blind student may also need help in improving his personal appearance. He may not be aware of untidy or inappropriate dress, hair style, gait and posture, or other mannerisms, often due to his lack of visual models for behavior.

> The visually handicapped student who is confident in getting around in his environment is more likely to be socially confident.

Fundamentally, the differences between the visually handicapped student and his sighted classmates are few. The similarities are many. Just like any other student he will have individual aptitudes, needs, and interests that you should know about. This can be accomplished in the same manner that is used for sighted students. Through the use of interest and aptitude tests you can get a sense of the student's potential. Knowledge of his hobbies and past work experiences can also be helpful in getting a complete picture of the student. Checking the knowledge that he has of his family's, relatives', and friends' jobs can help give you an indication of how much exposure he has had to the job world.

Review

► 1. How might there be differences in the instructional assumptions you can make about persons who were recently visually impaired as compared to persons totally blind since birth?

► 2. If you were going to teach the operation of a machine to a totally blind student, what steps might you take to ensure that the relationships of the machine's parts are clear to him?

## Considerations Implicit in Vocational Tasks

Now that we have covered many factors that are helpful in understanding the special needs of the visually handicapped student, and compared them with sighted students, we should analyze the various implications of these needs in the vocational teaching/learning setting.

Physical Considerations. A study was done in rehabilitation agencies in California to find out what individual characteristics of blind adults are important for success in rehabilitation. Interestingly, the study found that the most significant variable that differentiates between success and nonsuccess in vocational rehabilitation is the adequacy of orientation and mobility skills. In other words, the better a student can get around, the better his chances for successful vocational rehabilitation. The importance of this point can hardly be overemphasized. Before anything else can be considered, the orientation and mobility of the student in his environment must be taken care of.

- orientation--the process of using remaining senses in establishing one's position and functional relationship to objects in the environment.
- mobility--the ability to move safely, effectively, and comfortably from one place to another within the environment by using the remaining senses.

One of the first things you'll want to be aware of is the level of orientation and mobility skills that the visually impaired student has. Has he had any formal orientation and mobility training? If not, are such services available to him through the school district? The State Department of Rehabilitation can provide such a service in order to help him prepare for employment. If the student's skills are underdeveloped in this area, all efforts should be made to fully develop them. Resource personnel who can be of help in this area include the special education teacher, the orientation and mobility instructor, and, if appropriate, the local vocational rehabilitation agency.

> The more independent a blind person is, the less helpless he is and the more accepted he is by employers, fellow employees, relatives, friends, and neighbors.

Mental Considerations. A popular fallacy (with possible psychological damage to the visually handicapped student) is the assumption that there is a difference in intelligence and potential for educational achievement between the sighted and visually handicapped. Unless the student has a mental handicap in addition to the visual one, there is no reason to accept such a belief. Once that notion has been dismissed, attention can be devoted to those mental considerations that are implicit in the task as they particularly effect those with impaired vision or no vision.

- The blind student cannot rely upon his sight to tell him of the relationship of one object to another
- The blind student may have a poorly developed concept of the space and form of an object.

These two points should be kept in mind when considering the task for the blind student. Does the task require prior knowledge of the relationships of objects to one another? Is the shape and size of an object important? If so, explanation in meaningful terms may be needed by the blind student.

Social Considerations. It is extremely important that social adjustment take place so that the student is at ease with classmates and employers and employees at any work-experience location. The totally blind and visually impaired need to be accepted by peers and adults and to be included in interaction with them--not as special cases but simply as human beings.

Emotional problems in social adjustment are not an inherent consequence of a visual handicap. If there is a display of such maladjustment, it often is a result of negative attitudes from others which in turn produce a negative self-image for the student. Harmonious social acceptance will help produce a harmonious and comfortable atmosphere for learning and performing the vocational tasks.

Attitudes and Interaction. The attitudes of others toward the visually handicapped person have a direct bearing not only on his or her self-image and self-esteem but also on his or her own attitudes and productivity. By setting an example yourself and by reinforcement of classmates' positive attitudes and resulting behavior toward the student, you can make the student feel comfortable, welcome, and at ease.

Communications Considerations. It is obvious that the totally blind and visually impaired must rely on hearing, touching, and smelling more than will sighted persons. It must be emphasized that these visually handicapped persons do not suddenly acquire more acuity in these senses than they had before sight impairment or loss of sight. Those born blind were not also born with more acuity in other senses, and contrary to widespread belief, they are not supersensitive. Unless there are other sense impairments, the visually handicapped simply rely on their other sensory systems more frequently than do the sighted and develop them more fully.

Generally, even proficient braille readers proceed at a much slower pace than do persons reading regular print. Taped instructional materials are being used with increasing frequency for teaching the visually handicapped. Techniques have been developed to compress speech on audio cassettes. This allows a higher rate of speech (and listening) without distorting voice quality. The procedure enables the blind student to receive information at a rate more comparable to sighted reading.

Facilities Considerations. In helping the visually handicapped student adjust to your particular classroom environment, to the tasks involved in vocational education, and to involvement in a work-experience job, there are several considerations having to do with facilities that should be taken into account. Many of these necessities will have been provided by other school staff, but it would be a good idea for you to check into them yourself by asking the student or his special education teacher.

- Transportation to the school. Does the student have a regular and dependable way of getting to school?

- Orientation to the school building. Has someone (an orientation and mobility specialist) devoted time to assist the student in his orientation to the building itself so that he knows how to get from his prior class to yours? Does the student know where the staircases (if any), restrooms, drinking fountains, cafeteria, etc., are?

- Orientation to the classroom and/or workroom. Have you or any of the other students assisted the student in becoming oriented to the classroom, making sure that he learns thoroughly the layout of the room and where desks, tables, chairs, equipment, tools, machine, etc., are? Is it clear to the student just how many and what kinds of equipment, tools, materials, etc., are in the room and available for his use?

- Transportation to and from the work-experience job. Have you or has someone else assisted the student in making arrangements for transportation to and from the work-experience station?

Review

► 1. Why are orientation and mobility important considerations?

► 2. How can you help the visually handicapped student adapt socially?

# Establishing A Plan for Individual Instruction

How would you set up a program of instruction for visually handicapped students?

In planning strategies for teaching the visually handicapped student, it should be kept in mind that such planning will be based primarily on individualizing the instruction to meet the needs of the student. This is desirable for any student--sighted or visually handicapped. Naturally, your plans for the totally blind or the visually impaired will require some special tailoring, but once these steps have been taken, there should be no impediment to a smooth operation of your class.

Your plans should include the following, which we will discuss in more detail in this module:

- Basic background information
- Goals and criteria
- The instructional framework
- Periodic assessment of student growth
- Increasing teaching effectiveness

## Obtaining Basic Background Information about the Student

As for any student--sighted or visually handicapped--you need to gather certain basic kinds of information. In addition to such general information, you will, in the case of the visually handicapped student, need also to obtain particular background material that has to do with the student's visual handicap.

Information You Can Use and Where to Get It. You should gather information, pertaining to the student's academic history, developmental and health history, personal and social development and vocational readiness. The following tables in this section can serve not only as

a checklist of records and information you can use but also as a quick source guide for obtaining such background material.

| Academic History | Source |
|---|---|
| • Achievement/ability/proficiency test results | • Classroom teachers, special education teacher, principal, counselor |
| • Intelligence test results (if available) | • Principal, counselor, school psychologist |
| • Courses taken and grades | • Cumulative records, special education teacher |

You will very likely receive information about the academic history of the student not only from formal records but also from the people themselves who are or have been involved with the student. Much from the latter source may be subjective and opinionated. Although you will be primarily interested in the recorded factual information, this personal appraisal of the student may be of some help to you. However, these opinions of the student's ability and work capacity may or may not be accurate, and therefore should be accepted cautiously.

| Developmental and Health History | Source |
|---|---|
| • Attendance records | • Principal, former teachers, counselor |
| • Physical health information | • School health personnel, parents |
| • Ophthalmologist's evaluation and prognosis | • School health personnel, student's ophthalmologist, special education teacher |
| • Development of braille and/or large print reading skills; development of other aid skills | • Student's former teachers, principal's or counselor's records, special education teacher |

The student's developmental and health history will be important to you in many areas. Such knowledge will help you to understand the student's particular visual problem and how it is related to his abilities, capacities, and physical needs to accomplish tasks. Knowing the level of his reading skills and ability to utilize supplementary aids will help you greatly in individualizing the student's instruction and in planning his coursework.

| Personal and Social Development | Source |
|---|---|
| • Cultural/ethnic factors | • students, parents, school staff |
| • Family situation and status | • student, parents, school staff |
| • Family's attitudes about handicap | • student, parents, classroom teacher, special teachers, counselor |
| • Parental involvement in student's education | • Parent, classroom teacher, former teacher, the student, |
| • Behavior patterns with classmates and staff | • Your own observations, classroom teacher, former teachers, counselor, other students, school psychologist |
| • Self-concept, self-esteem | • The student, your own observations, former teachers counselors, special education teacher |
| • Student's attitude about handicap | • Student |
| • Hobbies, special interests | • Student, your own informal conversations with the student, other teachers, parents, counselor |

It is important in any educational setting to know the cultural and ethnic backgrounds of all students because of the conflict that can occur when there is a variance between the values of the family and those of the school. Getting to know the student and his family will not only alleviate potential pressures from this source but will clear the air so that you can deal with other problems inherent in the personal and social development of the student. Knowledge of the family situation -- marital status of the parents, number of siblings, other members of the household , mother working or not, father's occupation, etc. -- can be helpful background material that will help you understand the student and teach him successfully. The family's attitude toward the handicap as well as the student's are important factors to become aware of. Whether or not the student's parents are interested in and involved in his/her education is an important element in any student's ability to achieve educationally, whether or not there is a handicap. Behavior and interaction patterns with classmates and staff and the student's own self-appraisal will have a great effect on his work. Knowledge about these factors will serve as a foundation upon which you can remedy the negatives and enhance and build upon the positives.

| Vocational Readiness | Source |
|---|---|
| • Existing vocational skills | • Your own assessment through observation of and discussions with the student |
| • Previous vocational education courses and performance records | • Principal, counselor, former vocational education teacher(s) |
| • General work habits and attitudes | • Your own assessment through observation, former teachers, supervision of work-related experience (if any) |
| • Assessment of current status of vocational aptitudes and attitudes | • Your own assessment through observations of and discussions with the student; former vocational education teachers |
| • Previous work-related experience | • Principal, counselor, former teachers, supervision of work-related experience (if any) |

Before launching on your own program for the student, it's appropriate to become fully informed about his existing task level competencies, his previous vocationally oriented studies, and his work-relevant experience, including hobbies. Assessment of his vocational and general attitudes, aptitudes, and habits will enable you to know where to start with him.

Interpreting the Information. The task of coping with professional jargon concerning the student's handicap can, but does not have to be, an impediment to your understanding his social problems. Turn to the professionals themselves--the health personnel, the psychologist, the ophthlamologist, etc.--and have them explain in everyday terms what the problem means, what you can expect from the student with such a problem, and how to deal with the factors involved.

There will be labels--professional and otherwise--that surround the student. Although you must know the facts and the terminology, don't let these labels obscure the individual. Keep an open mind about the student as you develop a picture of him as a complete person. This will help you to work together with the student, and as a part of a professional team, to accomplish the work at hand.

It is important to decide what information about the student is constructive and useful in his vocational training. On the one hand, you'll want to use background information to be aware of potential limits and to exercise caution; and on the other hand, as a source of ideas and suggestions to enhance the student's capabilities and, in turn, his self-concept.

Review

► 1. Four areas of background information have just been discussed. As an exercise, and keeping your own vocational function in mind, make a list of the key things you would want to learn about the student so that you could make appropriate adjustments in your approach.

## Setting Goals and Criteria Appropriate to the Individual

Cooperative Planning with the Student. Before actually setting goals and criteria, there should be some ground work laid, a firm foundation built between you and the student. Using the background information you have gathered, you can approach the situation positively and confidently.

Cooperative planning with the student begins with establishing rapport. Perhaps from the information you have, there is some common interest or background element that could be shared--something not related to vocational education, for instance, a hobby or other personal interest. Your positive attitude toward and warm acceptance of the student, your treatment of him as a person, will do much toward building a good relationship.

By discussing vocational knowledge and career awareness, you will be opening up a new world of ideas, perhaps more preferable ones than those he had, if any. Then you can concentrate on examining career possibilities in the light of his handicap.

Remember, emphasize

rapport

cooperation

vocational awareness

career possibilities

constructive planning

Setting Individualized Course Goals. Now the stage is set for planning individual course goals. First, you will want to discuss with the student the range of course goals available to all students in the class and the objectives outlined to achieve these goals. Next, you will want to decide with the student which of these goals are of interest to him and feasible for him to achieve.

Such a decision-making process may be difficult or discouraging for the student at the outset because he may not be aware of the variety and number

of options open to him through alternative methods, technological aids, and the extent of your help. You must be quick to dispel his doubts with your optimistic approach, patience and understanding. Hopefully, the school district has an existing pre-vocational skills assessment center which you regularly use, or you personally have developed job samples that will give some idea of what potential the student has and where his interests lie.

Once course goals and objectives have been mutually agreed upon, allow room for changes that may be necessary along the way. Make sure the student is aware of your flexibility so that he will not experience frustration and be anxious about deadlines that he feels unable to meet. This does not mean leaning so far in the other direction so that the student feels "babied" or so that you invite indifference or disinterest on the student's part. Set up schedules, due dates and criteria that are reasonable and will not pressure the student excessively, then monitor his progress regularly.

> You can tailor goals, objectives, tasks, schedules, and criteria to meet the student's individual needs.

Personal Development. To a great extent, personal development underlies development in many areas. Vocational and social development depend a great deal on one's personal development. Perhaps this is true even to a greater extent for the handicapped student because of previous rejection and negative feelings of others.

Instilling qualities such as initiative, self-reliance, and independence, and making clear the necessities for them, especially if they are poorly developed, will do a great deal for the student. Thus, helping the student understand the need for these qualities when performing vocational education tasks in the classroom will automatically spill over into other areas of his life. Showing initiative, expressing self-reliance, and asserting independence will lead him into accepting responsibilities which, in turn, will build self-esteem and self-confidence in his future occupation.

The individualized plan for vocational instruction doesn't need to be complex, but should reflect tailoring to the individual. The example below is drawn from the information project document entitled A Five County Vocational Skills Training Program for the Blind, 1972, prepared by Gene Russell for the Santa Cruz (CA) County Office of Education.

INSTRUCTIONAL OBJECTIVES

Program Vocational Skills Training Date January 21, 1972

Pupil's Name Charles D. Hammer* Age 17

General Pupil Information:
Charles' vision impairment is due to congenital cataracts. His right eye has only light perception, while vision in the left eye is 5/100.

Instructional Goals:
1. Develop problem solving abilities related to the materials, processes, and products of woodworking.
2. Develop skill in the safe use of tools and machines.
3. Development of skills in communication and sociability.

Instructional Objectives:
1. At the end of the semester, Charles will understand the following major concepts and information concerning woodworking:
   a. Joints
   b. Turning
   c. Finishing
   d. Hand Tool Identification, Use, and Care
   e. Sawing
   f. Boring
   g. Shaping

   Charles' understanding will be reflected in his receiving not less than a B grade in the class.

2. By the end of the semester, Charles will be able to unassistedly operate the following pieces of equipment, performing at least one operation with each, and throughout the semester, without causing bodily injury to himself or his classmates:
   a. Lathe
   b. Drill Press
   c. Mitre Saw
   d. Jointer
   e. Radial Saw
   f. Surface Planer
   g. Table Saw

3. By the end of the year, Charles will be able to independently ask for and offer assistance to other students 10 times to increase his sociability within a group.

*Fictitious name

Teacher _____

In cooperation with the special educator, you may be able to help the student build social skills, along with the previously prescribed teaching about grooming, etiquette, etc. Social skills should include knowing how to be at ease in meeting new people, what to talk about, how to work cooperatively with fellow students and co-workers. It's imperative that the student feel comfortable among peers and with staff members. Such comfort will come about only with interaction that promotes the student's acceptance. In turn, being at ease and feeling self-confident with classmates and school staff will pave the way toward positive identification in the work-experience setting and in the world of work.

> Can you think of other social skills you could impart to the visually handicapped student...skills that would be helpful to him in gaining acceptance in the work world?

Considering the Instructional Framework

Physical Facilities. Earlier we mentioned orienting the visually handicapped student to the school and work-experience environments, including the classroom and/or workroom. In addition, you'll want to think in terms of the smaller setting: The actual work area where the student will be spending his "learning/doing" time.

It is advisable that the severely visually handicapped student initially spend time and effort exploring his new environment. He will need to walk around the room, touching walls, doors, etc., and examining equipment, work tables, chairs, etc., not only to orient himself to the locations of everything necessary to the task but also to learn the shape, texture, and size of things new to his experience. In a sense, he is "rehearsing." Once he has learned the layout, what and where everything is, there will be little necessity to explore further. It is important to keep this point in mind because so many of us who are not familiar with the handicap may picture the individual as someone groping around the room every day. On the contrary, once the visually handicapped person becomes oriented, he will get around with nearly as much eas as a sighted person.

The layout of the student's own work areas are of paramount importance. Once he has oriented himself to the room as a whole, it is equally necessary for him to be oriented to the smaller settings where he will be working. There should be easy mobility in and around each area and from one area to another, for instance from his desk to a machine area. Once again, any physical changes in these individual settings that may interfere with orientation and mobility should be told to the student promptly.

Let's discuss several parts of the student's work setting. You will want to avoid or circumvent potential problems and hazards; and you will want to provide maximum efficiency and adequate physical comfort in his use of work space and equipment.

The desk: If possible, the student should be provided with a movable desk that can be adjusted for height, position, and angle. For instance, adjustment for height may be needed for the student with certain visual impairments. It is better to raise the desk than to have the student constantly leaning over the desk to be able to use residual vision. The angle of the desk has to be taken into consideration in solving problems of sensitivity to glare in addition to providing maximum and evenly distributed light. It is helpful if the desk is a light, neutral color with a dull finish. Portable, adjustable book stands may be helpful also.

Seating arrangement/desk placement: When deciding where the visually handicapped student will sit and where his desk will be placed, you should be sure that he can hear clearly since he must rely so heavily on the auditory sense. In addition, seating arrangements for the student who has residual vision should include consideration of his partial sight, placing him near chalkboards, visual media, and teaching materials utilizing large print if necessary.

Noises: The visually handicapped student, will depend a great deal on what he hears not only as a guide for mobility and orientation but as a major avenue for learning. However, you should be alert to detect extraneous noises that might be masking the auditory cues necessary for getting around easily and for instructional purposes. Try to eliminate or tone

down such noises if possible. Try to distinguish between noises necessary and helpful for him and those that are indeed extraneous, "masking" ones.

Safety factors: You may be apprehensive about the visually handicapped student's use of special equipment. Your fears will probably be centered on doubts about his ability to use tools, machines, etc., without injuring himself or damaging the equipment. However, once the student has "learned" the tool or machine--that is, handled it, felt it, been shown what it is used for and how, and committed these things to memory, he can use many (though perhaps not all) machines with acceptable accuracy. Note, however, that some minor adaptations of the machine may be required to make this possible. As an example, setting the depth of cut on a lathe can be accomplished readily once raised bumps have been added to the calibrated dial on the cutting tool feed crank.

In spite of all we have said about the visually handicapped person's ability to get around, to use equipment, and to learn essential vocational tasks adequately (once he has become oriented to the environment and its parts and elements), you must of course think in terms of safety factors by being alert to hazards that even the very well-oriented handicapped student may be subject to.

The chief factors to consider are:

- Obstructions or changes in the room.
- Inappropriate or inadequate safeguards on machines.
- Noise that masks a hazard.
- Undue glare and shadow effects that mask a hazard.

Other common sense preventive measures, such as seeing that drawers are not left open, will become obvious to you on a day-to-day basis. However, you may also want to make sure that safety devices on equipment are not simply visual ones. If there is potential danger and an auditory and/or tactual safety device seems wise for the visually handicapped student, see that it is added.

Review

1. What can you do to orient the student to your classroom or workroom?
2. How can you involve classmates in helping the visually handicapped student?
3. Name some precautions to be taken so that the student can avoid accidents in getting around the classroom and/or workroom.

Using School and Community Resources. It's clear that human resources, particularly the special education teacher, are important to your instructional planning. Not only do they have information you need, but they will also share the instructional tasks. Braille requirements, for example, are not something that you'll face as a daily problem. The student, the special educator or resource teacher, and an instructional aide customarily handle this on a routine basis. Your job is to get the hand-outs, instructions and test materials given to them in advance so that there is time to accomplish the brailling itself. In order to facilitate your student's work effectiveness you may want to braille-label storage bins or work tools. In such a case you'll find these same persons willing to help accomplish the task.

Of course, other resources in the school should be considered as well. The media center may provide helpful instructional materials, but remember that the primary modes of learning will be tactile and aural, not visual.

Among the more helpful resources in the community are 1) The Lions Club and other organizations which raise funds for equipment purchases or for special activities, 2) Braille transcribing and audio recording volunteer groups, 3) The State Rehabilitation Office and other public or private agencies in your area which may provide additional services, including temporary instruction in mobility so that the student can learn the route to a work experience station, 4) the state library, through which special listening equipment and materials from the Library of Congress may be borrowed.

Curriculum. Very few changes in the curriculum need to be made to accomodate the visually handicapped student. Here are two general principles.

Concreteness: The visually handicapped student may lack a well-developed concept of space and form. Generally, things he cannot touch or hear are difficult to conceptualize and hold little meaning for him. The use of models to illustrate the space and form of an object is often very helpful.

Unified instruction: When a sighted student enters a house, the relationship of the walls, the floor, the roof, and the windows is apparent to him. The totally blind student lacks this use of sight to unify knowledge as a whole. In order to make everything come "together" for him it is important that each task be presented in as logical a manner as possible.

Note how the specific examples in the box below show various ways of adapting different course content.

Electrical:
An audio circuit analyzer can be adapted with braille dials. Allow your visually impaired students to practice testing the resistance of as many things as possible.

Metalworking:
Explain wheel revolutions on equipment in terms of the movement of hands on a clock. That is, one quarter turn is equal to fifteen minutes, a full turn equals one hour, etc.

Woodworking:
Simple raised-line drawings can be used to enable a visually impaired student to read a plan. These can be made with a special kit available from the American Foundation for the Blind, or with braille paper and perforating wheel.

Automotive:
In adjusting the points on an engine, place cellophane between the points and rotate the distributor until the points open and the cellophane can be pulled out.

See K. Hanninen, Teaching the Visually Handicapped, Columbus: Charles Merrill Publishing Co., 1975, for further examples.

Specialized Materials and Equipment. The vocational educator needs to be aware of specialized materials and equipment which can aid instruction and increase the employability of the visually handicapped student. Here are some.

- Braille and Large Print Textbooks. Many textbooks are available in braille and large print. Material which is not already available can be transcribed.
- Slate and Stylus; Braille Writer. The slate and stylus allows the visually handicapped student to jot down short notes in braille for himself, but is not suitable for manuscript writing. The braille writer, on the other hand, has levers which operate manually to produce braille on plastic sheets much like a typewriter produces print.
- Audio Aids. Cassettes and recorders are considered a basic tool for the visually handicapped. Recordings enable a student to keep a verbal record of most things which are normally received in printed form by sighted students.
- Closed Circuit Television (CCTV) and Other Magnifying Aids. CCTV is used primarily for magnifying regular sized print for persons with low vision. Other magnifiers of various types can be used to enlarge objects as well as reading material.
- Abacus and Talking Calculator. The abacus has traditionally been used by visually handicapped persons for making mathematical calculations. However, several calculators with audible or braille output are now available. These can greatly aid the visually handicapped in jobs requiring mixed mathematical calculations.
- Electronic Reading Aids. The Optacon and Stereotoner are devices which enable blind persons to read standard ink print following a period of training. Each has a small probe which passes over ink print, converting it to tactile images in the case of the Optacon, and auditory tones in the case of the Stereotoner. Although neither device is inexpensive the availability and continuing development of these and more advanced aids should substantially increase the employment potential of the visually handicapped.
- Travel Aids and Electronic Environment Sensors. The long cane aids safe and efficient travel. The trained long cane user, moving the cane from side to side as he walks, is able to locate travel landmarks and identify hazards in his path. Electronic environmental sensors include the laser cane and sonic guide glasses. These work by emitting ultrasonic signals which "bounce" off objects in the environment, helping the blind traveler to identify different types of obstacles and/or shapes in his surroundings.
- Special Vocational Aids. The Annual Catalog of Aids and Appliances for Blind and Visually Impaired Persons distributed by the American Foundation for the Blind contains a section on vocational aids. These include specialized writing and drawing aids, soldering irons, wrenches and screwdrivers, and braille rulers, tapes, squares, and marking gauges. The following page contains examples.

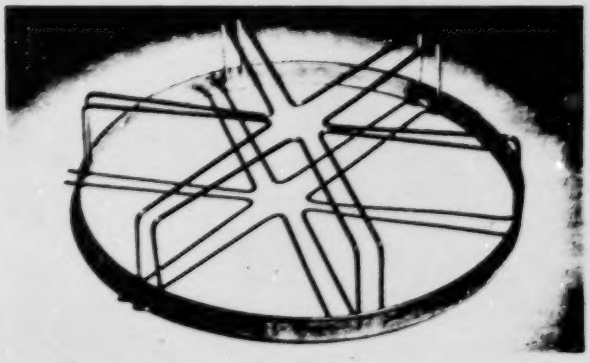
Telescopic Click Rule.

AFB Scientific Braille Calculator

Stanley Combination Square.

THE OPTACON

Starrett Micrometer. — AFB Model.



Pie Cutting Guide

EXAMPLES OF SPECIAL EQUIPMENT USED BY THE VISUALLY HANDICAPPED AVAILABLE FROM THE AMERICAN FOUNDATION FOR THE BLIND

Methodology. Much of your instructional approach can be unchanged, but common sense suggests that you

- Verbalize visual cues (e.g., hard movements) when you demonstrate
- Check your terms to avoid abstractness (e.g., "this fastens on there")
- Make clear how similar parts or processes can be distinguished by touch or sound
- Encourage sighted classmates to be helpful but not to do the student's work
- Seat the visually impaired student in a position where he can hear you clearly, and has adequate lighting
- Always address the student himself, using his name, and avoid talking to him through another person.

Instructor's Self-Examination. In previous sections, we have discussed the importance of your relationship with the student on his development, attitudes, and self-concept. It will be necessary for you to be constantly alert to your impact on the student. It calls for frequent self-examination.

On a regular basis, ask yourself questions such as the following:

- Are my attitudes toward the student positive?
- Am I thinking of the student as an individual, a whole person?
- Am I sensitive to the student's total progress, not just one task that may not be feasible for him to perform?
- Am I patient with the extra time and energy necessary to help the student?
- In my interactions with the student, am I reinforcing him positively?
- Am I being successful in creating rapport with the student?
- Am I maintaining a stance of flexibility in schedules and demands on the student?

In thinking about yourself, keep in mind that you,are constantly influencing the other students' attitudes and behavior toward the handicapped studert by the example you set in working with him.

Review

1. From what organization could you obtain a catalog of aids and appliances for the blind? What person in your school district might already have such a catalog?
2. Name three ways you might get assistance for your blind student through contact with the local Lions Club.
3. If you were going to give a written vocabulary list to the student (for words used in the vocational area) what special actions or procedures would probably be appropriate for the totally blind student in your class? Who else might become involved, and how?

# Carrying Out A Plan for Individual Instruction

> How will you monitor progress and overcome instructional problems which develop during training?

After getting your plans for instruction established, you need to consider how you will carry them out. One of your major concerns will be to avoid rigidity in following your original plan and to remain flexible and open to changes that might--and probably will--become necessary.

## Periodic Assessment of Student Growth

Your initial plans included setting course goals as well as interim objectives with schedules and due dates tailored to the needs of the student. Implicit in such plans will be arrangements for and scheduling of assessment of progress towards these goals and objectives.

> How and when will you assess the students' progress and development objectively, fairly, and frequently?

Assessment Indicators. First of all, you will have to be aware of possible assessment indicators. Evidence of progress and growth can be shown through:

- What you observe
- Statements from others about quality of performance
- Skill checklists
- Mastery of tools and equipment
- Employability
- Tests

Undoubtedly, depending upon your particular area of instruction, you will have checklists, tests, and other measurements of progress and skill attainment for your entire class, including the modified versions for the

visually handicapped student. These will be administered (or checked) at scheduled intervals. You should be prepared to modify testing schedules for the visually handicapped student and he should not be penalized for this requirement. Similarly, any products he produces should be judged not only for absolute quality but also for how difficult it was to achieve. (Thus in woodworking, smooth sanding should really be smooth, because he can touch it, but varnishing would probably be less perfect because he can't see it.) Task assessment should be frequent and non-threatening.

Another indication of progress and growth will be your assessment of the student's employability, that is, whether he has developed skills to an employable level. In the case of the visually handicapped student, this type of assessment is vital to his eventual placement. Quite reasonably, the employer will want evidence that he does have "experience" in job relevant skills and whether he will be proficient at them.

Criterion-Referenced versus Normative-Referenced Assessment. When you are assessing the visually handicapped student's progress (through tests, checklists, performance observation) you must always be assessing him with reference to the criterion especially set for him, not from a comparison with the norms set for sighted students or other visually handicapped students. In other words, you are concerned only with a) whether he achieved what you mutually agreed to, and b) whether it has reached an acceptable "employable" quality.

## Increasing Teaching Effectiveness

Efficient utilization of information and resources can contribute greatly to your own teaching effectiveness.

Background Information. In establishing your plans for individualizing instruction for the visually handicapped student, you may have amassed a great deal of background information about the student, probably much more than you actually need for a start. As you begin to carry out your instructional plans, it may be necessary for you to reacquaint yourself with some of the personal factors that may be affecting his performance. You may also find that there still remain gaps in your information and that you'll want

to discuss with the student or a resource person (such as the student's ophthalmologist or the special education teacher) any particular problem you have encountered.

> Don't wait for problems to happen; plan ahead to prevent or minimize them. Involve people and equipment creatively.

Awareness of the Student's Priorities. Your impact on the student will be greatly enhanced as you make yourself consciously aware of his priorities, not only in areas of weakness but also in those of his strengths. Assessment of those priorities should not rely only on records of his past but should be viewed along with what you are learning about him in current, everyday situations. Quite possibly, he'll do better than you expected.

Communication and Rapport with the Student. Interwoven throughout your ongoing plans for the student will be a necessity for improving and enlarging areas of communication with the student and increasing the degree of rapport you are establishing with the student. Frequent interaction with the student, showing an interest in what he is doing in class as well as outside the class, and reinforcement of positive attitudes, appropriate behavior, and task accomplishments will all be factors in improving communication and rapport.

Modifying the Program. As you pursue additional information about the student as needed, explore and utilize resources available to you, interact with the student and establish rapport, and become aware of his needs, you will be able to modify his program accordingly. Remaining flexible and ready to make these alterations will enhance your performance as instructor and will benefit the student in adapting to his new work-study environment and succeeding in a new role.

## Overcoming Problems

Even with all that has been said, problems may still arise in the process of educating the visually handicapped student; and no doubt there are some areas we have not covered that you have questions about. Let's look at some areas of concern and possible solutions.

Problem: Many textbooks are available in braille form from either the State Department Clearinghouse Depository or directly from the American Printing House for the Blind. A problem may arise, though, when the textbook you wish has not been transcribed into braille form.

Solution: Volunteer groups of braille transcribers can solve the problem nicely. By checking with the special educator you can identify volunteer groups in your area. Braille transcribing is a time-consuming process, and adequate time should be allowed for completion of the task. (For general reading that does not require referring to specific passages, recording the book on tape should be considered.)

Problem: An orientation and mobility specialist may not be available in your school district, and the visually handicapped student may have had little training in these skills. What do you do?

Solution: Have the school contact the nearest State Rehabilitation Office. They may make the orientation and mobility services available to the visually handicapped student. In the meantime a sighted guide can be provided for the student. He grasps the guide (a sighted student) firmly but gently just above the elbow beside which he intends to walk. The handicapped student should walk half a step behind the guide. The guide should walk at his normal pace, and the student should pay attention to the arm motions, since these movements tell what the guide is doing or is about to do. A greater degree of independence should be the goal. The student should become aware of routes being taken as well as significant landmarks, buildings, and points of interest along the way. In time the visually handicapped student will get an idea of where things are and will be able to move independently in his environment.

Problem. Teaching a visually handicapped student will take up more time and require extra supervision.

Solution: This type of student may require more individual attention initially when new tasks or machines are to be learned, but once he understands the task he often needs no more supervision or attention than other students in the class. Generally, the same behavior should be expected of the visually handicapped student as is required of sighted students. His work must be judged on its own merit, and not accepted at an inadequate level of quality.

Problem: You are more than willing to accept a visually handicapped student in your vocational education class but don't quite trust him around machinery. Most tools and instruments were developed with the thought that the user would have good vision. How can the student safely operate them?

Solution: First of all, be assured that statistics from insurance companies and from industry, business, governmental surveys show clearly that the visually handicapped are, as a group, safer workers than the sighted (Russell, 1972). Of course no student, sighted or otherwise, should operate any tool or machine without prior study of how the machine operates, but visually impaired students can and do operate power machinery safely.

Teaching visually handicapped students will be a new experience for you. It will be a challenge and, as it always is with challenges, there will be times that you will have to struggle. Yet there will be a majority of times that things work out better than you could have imagined. Although success may not be immediate you should be able to see definite progress.

In implementing your instructional plan, you should consider an initial designated time span as a trial period. Depending on your own course or semester requirements, choose a sufficient length of time at the beginning of the semester to adequately observe the student's progress. If the student is having adjustment problems, if he is obviously requiring more time to learn than your original plans had allowed, or other impeding factors have come to light, the trial period can be judged as just that, an exploratory time to assess how well the originally established plan is working. Then you can set new goals, objectives, time schedules, criteria, etc., in light of what you have learned during the trial period.

## Documenting Efforts and Outcomes

You will want to keep ongoing records and files of the student's attainments just as you do for your other students. However, it would be very helpful for future use and for other persons involved with the student's education, vocational training, and future employment if you recorded descriptions of special problems, how and if you were able to solve them, and recommendations for dealing with them at a later time, or in other situations and circumstances.

In your efforts to establish and maintain rapport with the student's parents, you will want to have written records to refer to when conferring with them about their son or daughter. Finally, it's essential to share documented progress attainments with the student himself to reinforce and praise strengths and to point out skills needing further development.

## Follow-Up

Although you are not responsible for a student once he has completed his objectives with you, there are some follow-up procedures and activities that can be very valuable to the visually handicapped student, and to you. Evidence of success after your class is a good sign that your class was beneficial. If it was, the student will think of you as a:

- Post-Course Resource Persons. After the course has been completed you continue to be a potential resource for the visually handicapped student. He will certainly appreciate your interest in his progress and growth, acquisition of new skills, and personal development.
- Post-School Resource Person. When the visually handicapped student completes his schooling, he will probably need to turn to you at least occasionally for employment assistance, not only as a reference but also for your contacts with other persons. Your knowledge of his abilities at vocational tasks is unique and should be utilized.

> If you feel comfortable in your role as teacher, you will very quickly feel comfortable with a visually handicapped student in your class. Teaching and learning processes are fundamentally the same, but working with the handicapped is especially rewarding.

## Review

► 1. Assume that the visually handicapped student did poorly when he was trying to pass a particular performance objective in your class. What factors might cause this, and what could you do about it?

2. Testing of outcomes tells you something about the student and the course. Discuss how non-employability (as an outcome) could reflect on both.

## REFERENCES

Hanninen, K. Teaching the visually handicapped. Columbus, Ohio: Charles Merrill Publishing Co., 1975.

Prime Study Group III, Eleventh Institute on Rehabilitation Services. Services to the blind: A community concern. Washington, D.C.: U. S. Department of Health, Education, and Welfare, (SRS) 73-25077, 1973.

Russell, Gene H. A five-county vocational skills training program for the blind: Project document. Santa Cruz, California: The Santa Cruz County Office of Education, 1972.

# Resource Section

This section is intended to provide suggestions for those vocational educators who would like to learn more about the handicapped, and leads for those who are seeking resources to help them in serving the handicapped. It includes:

I. Bibliographic Resources
   A. Further study on the visually handicapped
   B. Selected listing of published materials and resources

II. Agencies and Service Groups Providing Services to the Visually Handicapped
   A. State of California
   B. Federal Offices and Agencies
   C. Private and Non-profit Agencies and Organizations

# I. Bibliographic Resources

## A. Further Study on the Visually Handicapped

Hanninen, K. A. Teaching the visually handicapped. Columbus, Ohio: Charles E. Merrill Publishing Co., 1975.

A basic textbook on methods of teaching the visually impaired. Particular emphasis on methods and materials which are useful with the visually handicapped in regular classes.

Hill, E., and Ponder, P. Orientation and mobility techniques: A guide for the practitioner. New York: American Foundation for the Blind, 1976.

The ability to move from place to place easily and safely is important to the vocational success of blind workers. Although intended primarily as a manual for persons trained in orientation and mobility techniques, this book serves as a useful reference for others working with blind persons who need to understand the mobility training process.

Kirk, Samuel A. Educating exceptional children. Boston: Houghton Mifflin Co., 1972.

An excellent basic resource in the field of special education. Provides an integrated and unified approach to understanding various handicapping conditions and their educational implications.

Love, Harold D. Educating exceptional children in regular classrooms. Springfield, Illinois: Charles C. Thomas, 1972.

Examines present policies and practices in serving handicapped students in regular classes. Each handicapped group is treated separately, with particular problems and solutions discussed.

Lowenfeld, Berthold, (Ed.). The visually handicapped child in school. New York: John Day Co., 1973.

Excellent publication dealing with diagnosis, educational methodology, and social adjustment of the visually impaired.

Nelson, Hilding E. The visually handicapped student. In Serving students with special needs in vocational education. Gilman Hot Spring, California: Mt. San Jacinto College, 1971. (filmstrip and cassette)

Part of a multiunit series, this presentation consists of an audiovisual package and printed instruction guide. Units in the series may be ordered separately and are excellent sources of information for the vocational educator.

Prime Study Group III, Eleventh Institute on Rehabilitation Services. Services to the blind: A community concern. Washington, D.C.: U.S. Department of Health, Education and Welfare, DHEW Publication No. (SRS) 73-25077, 1973.

Report on delivery of rehabilitation services to the visually handicapped. Special emphasis on occupational information and job development.

Russell, Gene H. A five-county vocational skills training program for the blind: Project document. Santa Cruz, California: The Santa Cruz Office of Education, 1972.

A three-year project designed to provide vocational training to visually impaired students in a five-county area, provide in-service training to regular vocational educators working with blind students, and develop guidelines for organizing and implementing such a program.

## B. Selected Listing of Published Materials and Resources

Aids and appliances for the blind and visually impaired. New York: American Foundation for the Blind, Inc., 1977.

This 32-page catalog lists over 300 items specialized for use by the visually handicapped. Available at no charge from AFB, the catalog also contains a listing of other suppliers of aids and appliances for the blind and visually impaired.

A bibliography of materials for handicapped and special education. Lambert, R. H. Center for Studies in Vocational and Technical Education, University of Wisconsin-Madison, 1975.

An extensive listing of vocational education resource materials for use in programs serving the handicapped. This can be obtained from: Center for Studies in Vocational and Technical Education, 321 Education Bldg., 1000 Bascom Mall, Madison, Wisconsin, 53706.

A list of California transcribers. Clearinghouse Depository for the Visually Handicapped. Sacramento, California: California State Department of Education, 1976

A directory of volunteer transcriber groups engaged in the transcription of print materials into braille. Copies are free to schools.

Catalog of instructional materials for the handicapped. Clearinghouse Depository for Handicapped Students. Sacramento: California State Department of Education, 1972.

Provides free taping of instructional materials for handicapped students. Materials to be reproduced may be sent to: Master Tape Library, 1025 "P" Street, Room 251, Sacramento, California, 95814.

Educational aids for visually handicapped. Davis, F. E., and Lappin, C. W. Instructional Materials Reference Center for Visually Handicapped Children, 2nd Edition. Louisville, Kentucky: American Printing House for the Blind, 1971.

A catalog of sources of educational materials and aids for the visually handicapped. Contains a section on vocational education materials.

International Catalog: Aids and appliances for blind and visually impaired persons. Clark, L. L. (Ed.). New York: American Foundation for the Blind, Inc., 1973.

This publication lists distributers of aids and appliances for the visually handicapped. In addition to a section on vocational aids, the catalog contains sections on low vision aids, and money handling and telephone aids.

Measures of psychological, vocational, and educational functioning in the blind and visually handicapped. Scholl, G. S., and Schnur, R. New York: American Foundation for the Blind, 1976.

Listing of available tests which are considered appropriate for assessing persons with visual impairments. Contains a section on vocationally-oriented measures.

Volunteers who produce books: Braille, large type, tape. Washington: Library of Congress, Division for the Blind and Physically Handicapped, 1973.

Listing of services provided to the handicapped by the Volunteer Services Section of the Library of Congress. Also lists regional centers by state.

What, Who, Where. California Transcribers and Educators of the Visually Handicapped, (CTEVH) 1968.

Published as a supplement to the CTEVH Newsletter, this booklet is an excellent source of services and supplies for those working with the visually impaired. It can be ordered from volunteer services, Braille Institute of American, 741 North Vermont Avenue, Los Angeles, CA 90029.

The Governor's Committee for Employment of the Handicapped. Organizational Handbook. The California Governor's Committee for Employment of the Handicapped. Sacramento: State of California Employment Development Department, 1974.

An information publication which details the goals, organization, and functions of this important task force. Includes a directory of local committees.

Directory: Sources for handicapped job applicants. The California Governor's Committee for Employemnt of the Handicapped. Sacramento: State of California Employment Development Department, 1976.

A source book prepared for employers seeking to hire the handicapped. This 80 page publication lists the principle rehabilitation and training agencies within the state. State, regional, and local contacts are listed for the Employment Development Department, Department of Rehabilitation, public and private rehabilitation facilities, Regional Occupational Programs, community colleges, and state colleges and the University of California. The Directory includes a brief description of each type of recruitment source and the services it offers to applicants and employers.

## II. Agencies and Service Groups Providing Services to the Visually Handicapped

### A. State of California

California State Department of Education

Office of Vocational Education
721 Capitol Mall
Sacramento, CA 95814
Samuel Barrett, Director

Office of Special Education
721 Capitol Mall
Sacramento, CA 95814
Les Brinegar, Asst. Superintendent and Director

The Clearinghouse Depository for the Handicapped Student
721 Capitol Mall
Sacramento, CA 95814

An office which offers assistance in the procurement of specialized instructional materials and equipment for handicapped students. Provides consultant services for programs involving specialized use of media for instructional purposes.

Comprehensive Employment Training Act (CETA)
50 Fulton Street, Rm. 445
San Francisco, CA 94102
Howard Williams, Regional Manpower Coordinator

The purpose of CETA is to provide job training and employment opportunities for underemployed persons through a flexible and decentralized system of federal, state and local programs.

Office for Handicapped Individuals (in HEW)
50 Fulton Street
San Francisco, CA 94102
Martha Hislop, Regional Coordinator

Serves as the regional focal point, within the federal Office of Human Development, for program coordination and planning relevant to the physically and mentally handicapped.

California Area Learning Resource Center
600 S. Commonwealth Avenue, Suite 1304
Los Angeles, CA 90005

California area distribution center for specialized learning materials for handicapped students. Operates in cooperation with the National Center for Educational Media and Materials for the Handicapped (NCEMMH).

Below is a list of associate centers affiliated with the California Learning Resource Center, all of which circulate materials for handicapped students.

1. Anaheim City Schools
2. Placer County Office of Education, Auburn
3. Kern County Supt. of Schools, Bakersfield
4. San Juan Unified School District, Carmichael
5. Special Education Development Program, Chico
6. Contra Costa County, Concord
7. Imperial County Supt. of Schools, El Centro
8. Center for Exceptional Children, Eureka
9. Fountain Valley Elementary, Fountain Valley
10. School of Education/CSU-Fresno
11. Devereaux Schools in California, Goleta
12. Stanislaus County Dept. of Education, Modesto
13. Lancaster School District
14. Office of Supt. of Schools, Napa
15. Newport-Mesa Unified School District, Newport
16. Instructional Materials Lab. CSU-Northridge
17. Orange Unified School District
18. Placentia Unified School District
19. Tehama County Dept. of Special Education, Red Bluff
20. Shasta County School Office, Redding
21. Rowland Unified School District, Rowland Heights
22. Sacramento City Unified School District
23. Sacramento County Office
24. Department of Education, Sacramento
25. Scholarship and Special Instructional Programs, Sacramento
26. Office of County Supt. of Schools, San Bernardino
27. Department of Special Education CSU-San Diego
28. Teacher Learning Center, San Francisco
29. Office of Education, San Jose
30. San Luis Obispo County Schools
31. Santa Barbara County Schools
32. Special Education, Santa Barbara
33. Sonoma County Office of Education, Santa Rosa
34. Lassen County School District, Susanville
35. Torrance Unified School District
36. Ventura Unified School District
37. Visalia School District

California State Department of Rehabilitation
830 K Street Mall
Sacramento, CA 95814
Edward V. Roberts, Director

Manuel Arena
State Supervisor for the Blind

Responsible, at the state level, for state-federal programs of vocational rehabilitation for the disabled. The disabled include persons handicapped by mental or physical illness or impairment. The primary objective of this agency is to prepare disabled persons for gainful employment. Under federal sponsorship, the State Department of Rehabilitation supports research and demonstration projects, training qualified personnel, and facilities construction and improvement.

District Offices

Chico District Office
Service Area: Colusa, Glenn, Butte, Siskiyou Modoc, Shasta, Lassen, Tehama, Trinity, Yolo, Yuba, Plumas, Sutter, Sierra, Nevada

Sacramento District
Sacramento, Placer, El Dorado, Alpine

Santa Rosa District
Del Norte, Humbolt, Lake, Mendocino, Napa Solano, Sonoma

Oakland District
Alameda

San Francisco District
San Francisco

Pleasant Hill District
Contra Costa, Marin

San Jose District
Santa Clara

Redwood City District
San Mateo

Stockton District
Amador, Calaveras, San Joaquin, Stanislaus, Tuolumne

Riverside District
Riverside, Imperial

San Bernadino District
Inyo, San Bernadino

Fresno District
Merced, Mariposa, Madera, Fresno

Bakersfield District
Kern, Kings, Tulare

Salinas District
Monterey, Santa Cruz, San Benito

Santa Barbara District
San Luis Obispo, Santa Barbara

Long Beach District
South Los Angeles

San Diego District
San Diego

Downtown Los Angeles District
Los Angeles

East Los Angeles District
East Los Angeles

Van Nuys District
Northwest Los Angeles

Inglewood District
West Los Angeles

Anaheim District
Orange

Los Angeles Mid-Cities District
South Central Los Angeles

Norwalk District
Los Angeles

Covina District
Los Angeles

Pasadena District
Northeast Los Angeles

The Governor's Committee for Employment of the Handicapped
State of California
Employment Development Department
800 Capitol Mall
Sacramento, California 95814

At the state level, the Governor's Committee on Employment for the Handicapped forms a link between the President's Committee and local committees within the State of California. The primary goal of the Governor's Committee is to create a climate of equal employment opportunity for handicapped persons. Through local organizations, the committee seeks to develop job information, educate the public concerning job needs and abilities of persons with handicaps, assist agencies concerned with employment of the handicapped, and works toward eliminating architectural barriers which limit the employment opportunities of the physically limited.

Publications are available from the Governor's Committee on affirmative action, hiring the handicapped, disabilities in employment, architectural barriers, employment guides for the handicapped person, demographic and statistical information, and a variety of relevant guides, handbooks, and periodicals. Films are also available.

Listings of these materials can be obtained by writing to California Governor's Committee for the Employment of the Handicapped, 800 Capitol Mall, MIC 37, Sacramento, California, 95814, or by calling (916) 445-0676.

## B. Federal Offices and Agencies

Office of Education

A branch of the Department of Health, Education, and Welfare, the Office of Education aids state and local educational agencies in the establishment and maintenance of school systems. This office is responsible for Federal financial assistance to local agencies for special studies and programs, and gathers and disseminates information on the condition and progress of education in the United States.

Bureau of Occupational and Adult Education

National Advisory Council on Vocational Education

Division of Vocational and Technical Education

Comprehensive Employment Training Act

Bureau of Education for the Handicapped

National Advisory Committee on the Handicapped

Office of Human Development

Focuses resources within the Department of Health, Education, and Welfare on serving groups with special needs: children and youth, the aged, the handicapped, native Americans, and people living in rural areas. This office is responsible for effective policy development and for program management at the federal level.

President's Committee on Employment of the Handicapped

Committee for Barrier-Free Design

Office for Handicapped Individuals

Rehabilitation Services Administration

Office of Developmental Disabilities

Architectual and Transportation Barriers Compliance Board

Library of Congress
Division for the Blind and Physically Handicapped
Washington, D.C. 20542

Maintains regional centers which produce books for the handicapped in braille, large print, and on tape. Centers maintain a library of transcribed materials and are able to produce materials on request to meet special and individual needs.

National Center on Educational Media and Materials for the Handicapped
The Ohio State University
220 West 12th Avenue
Columbus, Ohio 43210

This agency provides a comprehensive national program of activities to facilitate the use of educational technology in instructional programs for the handicapped. Services are provided in cooperation with Area Learning Centers, Specialized Offices, and various public and private agencies.

Special Office for the Visually Impaired
American Printing House for the Blind
1839 Frankfort Avenue
Louisville, Kentucky 40206

This agency, subsidized by the federal government, provides educational materials to visually handicapped students at no cost. Requests for information or materials may be directed to the Instructional Materials Reference Center at the American Printing House.

Special Office for Materials Distribution
Indiana University
Audiovisual Center
Bloomington, Indiana 47401

President's Committee on Employment of the Handicapped
1111 20th Street, N.W.
Washington, D.C. 20210

Facilitates the development of maximum employment opportunities for the handicapped.

## C. Private and Non-profit Agencies and Organizations

American Foundation for the Blind
15 West 16th Street
New York, NY 10011

National research information agency which coordinates local and regional agencies serving the blind. Maintains library services for the blind. Develops and manufactures books and special aids for the visually handicapped.

Braille Institute of America
741 North Vermont
Los Angeles, CA

This organization is concerned with job development and placement for blind persons.

The Council for Exceptional Children (CEC)
1920 Association Drive
Reston, VA 22091

The CEC serves as a primary resource center, providing information, training workshops, and special assistance to those working with handicapped students.

CEC Information Center on Exceptional Children
1920 Association Drive
Reston, VA 22091

The center maintains and distributes materials of interest to those working with the handicapped. These include publications and audiovisual materials for teachers, administrators, and other concerned professionals. Toll Free Hotline (800) 336-3728

Library Reproduction Service
The Microfilm Co. of California Inc.
1977 South Los Angeles Street
Los Angeles, CA

This organization has a large print reproduction service.

Science for the Visually Handicapped
919 Walnut Street, 8th Floor
Philadelphia, PA 19107

A non-profit company which develops, manufactures, and sells special instruments, aids, and special materials for the blind and visually impaired.

National Braille Association
85 Godwin Avenue
Midland Park, NJ 08432

A volunteer organization which produces materials in braille, large type, and tape for the visually handicapped. This organization prepares special vocational materials for blind workers.

Recording for the Blind, Inc.
499 West Charleston Road
Palo Alto, CA 94306

A volunteer-centered organization which supplies free recorded educational materials to blind persons.

Visual Service Center
A Service of Sacramento Society for the Blind
2750 24th Street
Sacramento, CA 95818

This clinic provides thorough examination for low vision persons and assistance in being fitted with appropriate lenses and devices.

# Assessment Section

The questions in this section are intended as a check of your general understanding of the instructional considerations involved in teaching handicapped students in regular vocational classes.

The problems which follow are not "formula" questions in which a precise and exact answer is possible. Rather they are meant to stimulate your thinking and cause you to reflect on the content of the module as you write or type your responses on separate sheets of paper.

If you intend sending your responses to a cooperating agency for evaluation, be sure that you

1. Indicate the complete name of the module
2. Number all responses (Questions 1a, 1b, etc.)
3. Enclose your name and return address.

Problem 1.

A pamphlet put out by the American Foundation for the Blind selected jobs in the hospitality industry and indicates the visual requirements for each job. Here are three jobs excerpted from the pamphlet.

*Pantryman or Pantrygirl*—Travel vision and limited ability to read normal-size ink print.

Prepares salads, canapes, and other cold dishes; makes sandwiches on short order; prepares tea, coffee, and other beverages; slices cold meats and cheese; supplies waiters with desserts. Since ingredients in some salads call for seafood, pantryman removes shells from shrimp and lobster, and bones the fish. In some instances one person is assigned to making salads only and is hired full time as salad man/girl.

*Floor Housekeeper*—Travel vision. Limited ability to read normal-size ink print.

The floor housekeeper supervises and instructs housekeeping personnel, inspects their work, and reports to head housekeeper; also receives information of guest departures from the front office. Fills out various forms and reports.

*Room Clerk*—Sustained ability to read normal-size ink print.

Rents and assigns rooms to persons applying in person, by phone, or correspondence. Duties frequently include typing, filing, and other clerical functions; may involve operating the switchboard. When specific responsibilities are limited and call for a lesser degree of communicative skills, an individual with a minimum of reading ability may be able to perform successfully.

We can consider these as general guidelines, not necessarily applicable to particular blind or visually impaired students. Assume then, that you are a work experience coordinator. You teach a totally blind student that is interested in hotel/motel work and you feel he has the potential to succeed in that business. How might you

a) decide which of the three areas he might make the best initial impression and have the greatest chance of getting off to a good start?

b) reassure the employer that the blind student can actually do the job and will not be a burden?

c) modify training procedures to best prepare the trainee?

Problem 2.

Assume that it's the second week of school. You have just been contacted by the special education teacher who would like to place a visually impaired student in your woodworking class. She says the student is bright, hardworking and has a father in the building construction business. For each of the following three topical areas indicate what you would ask the special education teacher, then explain what significance or impact the question(s) might have with regard to your instructional approach.

a) orientation and mobility skills

b) type and status of the disability

c) goals and criteria

Problem 3.

As you accept the new visually handicapped student into your class, you are aware of the need to get some indication of his readiness for vocational training in computer programming. How might you proceed to assess the student? Frame your answer in terms of your approach to

a) discussing his level of career awareness.
b) establishing his social and personal development.
c) identifying appropriate performance tests and work sample systems.

Problem 4.

Assume you have a visually handicapped student who is graduating and has applied for a business machine operator's job he heard about. You know him to be qualified as a result of your course. What action(s) might you take to be of assistance if you informally learn that he might lose the job because of

a) employer doubts that he could "carry his weight"?
b) inability to transport himself to the place of business?
c) resistance by co-workers?